



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,899	09/20/2000	Masayoshi Iwase	10517/74	6300

7590

10/18/2002

Kenyon & Kenyon  
Suite 700  
1500 K Street  
Washington, DC 20005-1257

EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1745

8

DATE MAILED: 10/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

WA-8

# Office Action Summary

Application No.

09/665,899

Applicant(s)

IWASE ET AL.

Examiner

Julian A. Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 3-5, 7, 8, 10-12, 14-16, 18 and 20-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1, 3-5, 7, 8, 10-12, 14-16, 18, 20, 22-24, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) 21 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

Art Unit: 1745

## DETAILED ACTION

### *Remarks*

This Office Action is responsive to Applicant's amendment filed July 22, 2002.

The objection to claim 15 has been withdrawn.

Claim 19 has been canceled, thus rendering the examiner's objection to this claim as well as the 35 U.S.C. 103(a) rejection based on Nakanishi et al. moot.

Claims 2, 4, 6, 9, 13, 17 and 19 have been canceled, thus rendering the rejection under 35 U.S.C. 112, second paragraph moot.

Claims 1, 3-5, 7, 8, 10-12, 14-16, 18 and new claims 20-27 are presently pending.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 7, 10, 14 and 18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The rejection is maintained for the reasons of record. Applicant's response to the examiner's rejection with page and line citations of the specification is gratefully acknowledged. Applicant's arguments have been fully considered, however they are not persuasive.

Art Unit: 1745

Applicant submits that coolant plate [30] is fully supported by the specification to supply coolant flow, e.g. cooling water. The examiner concedes, however, it is asserted that the coolant flow is only disclosed within the coolant plate, while the scope of claims further limits coolant flow *from a separator* [emphasis added]. Thus, coolant flow within the separator is considered to be non-enabling even to the skilled artisan.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22, 23, 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 22 and 26 each recites the limitation "the end" in line 2, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claims 23 and 27 are rejected under 35 U.S.C. 112, second paragraph as being dependent upon a rejected base claim.

### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-5, 7, 8, 10-12, 14-16, 18, 20, 22, 24 and 26 are rejected under 35 U.S.C. 102(e) as anticipated by Kurita et al.

The rejection is maintained for the reasons of record for amended claims 1-18. The scope of the present claims, specifically independent claim 1, have been amended so as to recite "a gas

Art Unit: 1745

supply inlet which connects the fluid passage and supplies a gas to the fluid passage therethrough, wherein the gas supply inlet is located so that a gas flow between the gas supply inlet and the fluid passage is parallel to a gas flow in the fluid passage". In view thereof, Applicant submits that the claimed invention allows for gas "flowing from passage 305 directly onto surface 311 in the direction of flow across the joint body, *i.e.*, without having to immediately turn to begin flowing down the gas flow path". (Applicant's response, page 5) In reply, however, the examiner submits that the scope of the present claims does not preclude the gas supply inlet to result in the gas flow to "immediately turn" prior to flowing down the fluid passage. Further, the scope of the present claims does not recite *the extent* to which the gas flow between the inlet and the passage is parallel to flow of gas within the passage itself. [emphasis added] It appears to the examiner that Applicant intends to claim the substantially linear flow of gas between hole [305] and hole [306] such as illustrated in Figure 6, prior to the gas flow making a turn such as indicated by the arrows. However, absent of more clarifying language, in Kurita the gas flow between the inlet [12] and the passage is asserted parallel to the flow of gas within the passage itself such as at least within passage areas [16a], [17b] or [17d], since the scope of the present claims does not require the gas flow to traverse the entire length of the separator plate.

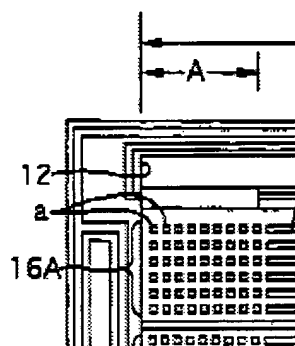
As to new independent claims 20 and 24, the rejection of record is similarly applied in addition to the following. The plurality of regions [16a], [17b], [17d] communicate with each other in that the regions are contiguous with respect to the gas flow passages formed therein. As to a regular pattern across the width of each region, it is asserted that a regular pattern of, e.g., six [a] projections or six [b] rib portions are present within each region. As to a regular pattern

Art Unit: 1745

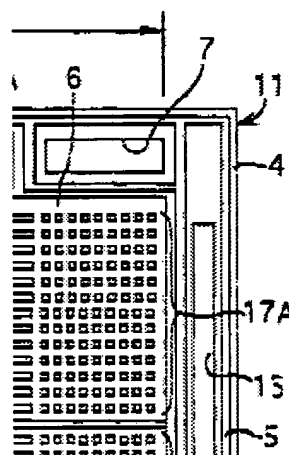
across the length of each region, it is asserted that a regular pattern of nine [a] projections at both ends of each region with an intervening rib portion [b] disposed parallel to its length is present.

As to claims 22 and 26 which recite a width of a turning passage between the end of the rib portion and an opposing peripheral wall of the separator, to the extent that the claims are understood by the examiner for the reasons discussed under 35 U.S.C. 112, second paragraph (discussion above), the width of the starting end of the rib projection [16a] when measured from this rib portion end and an opposing peripheral wall is less than the width of the immediately upstream region. For clarification, enhanced portions of the turning passages are herein shown:

First turning passage:



Second turning passage:



### *Allowable Subject Matter*

Claims 21, 23, 25 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record and to the examiner's knowledge do not teach or render obvious at least to the

Art Unit: 1745

skilled artisan the instant invention regarding each of the plurality of regions being narrower in width than the width of its immediately upstream region, i.e. increasing in width in the upstream direction for each and every one of the regions in the separator.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Pat. 5,840,438 to Johnson et al. is cited of cumulative interest. U.S. Pat. 6,365,295, although not qualifying as prior art, teaches narrowing widths for plural regions within in a separator. Japanese Patent 5-251097 teaches widths for gas channel grooves wherein the upper flow portions are made narrower relative to the down flow portions.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 1745

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



jam

October 11, 2002



Patrick Ryan  
Supervisory Patent Examiner  
Technology Center 1700